MEMORANDUM

TO: Bob Durand, Secretary, EOEA
ATTN: Arthur Pugsley, MEPA Unit
FROM: Tom Skinner, Director, CZM
DATE: January 5, 2001
RR: EOEA #12355 - Maritimes & Northeast Phase III and Algonquin HubLine

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Environmental Notification Form (ENF), noticed in the Environmental Monitor dated November 8, 2000. In addition, we have reviewed Applications for Certificates of Public Convenience and Necessity with associated reports and appendices filed with the Federal Energy Regulatory Commission (FERC), and the applicant's federal consistency certification for these projects. The project is categorically included for the preparation of an Environmental Impact Report (EIR). CZM recommends that reviews of the EIR and the federal Environmental Impact Statement (EIR) to be prepared by FERC be concurrent.

*Project Description*

The proposed project entails construction of a 30-inch high pressure gas pipeline which would bring gas originating from Sable Island, Canada from Maritimes Phase II in Methuen, Massachusetts to Beverly, Massachusetts (Maritimes Phase III). Algonquin is proposing to construct a 29.4-mile, 24-inch high-pressure gas pipeline (HubLine) that will interconnect with Phase III at Beverly, and pass through western Massachusetts Bay to the Sithe Fore River Station in Weymouth, Massachusetts. A 5.4-mile, 16-inch lateral is proposed to fuel the Deer Island Wastewater Treatment Plant. At Weymouth, the HubLine will interconnect with a 24-inch lateral that will soon be under construction. The two aspects of the proposed pipeline are being reviewed as a single project. CZM's primary jurisdiction is with the marine HubLine portion of the proposed project.

The applicant is proposing to use horizontal directional drilling (HDD) technology to connect the HubLine to Maritimes Phase III at Beverly, to place the pipeline under George's Island in Boston Harbor, and in the Fore River at Weymouth to connect to the Sithe/Braintree Lateral. In open water, Algonquin is proposing to bury the pipeline three feet below the ocean floor, where the bottom is suitable, with conventional dredging, jetting or plowing. Where the proposed pipeline crosses existing pipelines and

cables, and where the sea bottom is either bedrock or compacted glacial till, the applicant is proposing to lay the HubLine on the sea bottom and armor it.

*Requested Information*

In order to address the comments below, CZM is requesting that the proponent make positive identification on 1:25,000 NOAA charts or USCG maps of:

- existing natural gas infrastructure and utility rights of way in eastern Massachusetts;
- bottom sediments, soils, bedrock outcrops, and fault lines along the proposed marine route;
- subsurface vegetation in the vicinity of the proposed HubLine;
- known and traditional shellfish and finfishing grounds near the proposed route;
- essential fish habitat proximate to the proposed HubLine route;
- sediment quality data, in particular, data for the "Discontinued Disposal Area" between MPs 7.0 and 8.0.;
- positive identification of existing and proposed pipelines, cables and other utilities along the HubLine route. Some specific omissions in the current filing include the MWRA's outfall diffusers, the MWRA's inter-island tunnel, and the proposed Hibernia fiber optic cable;
- anchorages and shipping channels in or near the proposed project area;
- location of the various types of dredging proposed for placement of the HubLine;
- location of proposed blasting operations;
- location of proposals to lay the HubLine on the seafloor with armoring.

In addition, the applicant has stated that it will lay pipeline over existing foreign objects such as pipelines and cables. CZM requests that Algonquin:

- identify the owners of the foreign structures;
- identify any provisions in the Chapter 91 licenses for these existing structures that may affect the applicant's plans to cover them;
- provide evidence that Algonquin has permission from the owners to cover these structures;
- explain how existing structures will be maintained with a gas pipeline over them; and
- explain how future projects will be constructed if they cross the path of the gas pipeline.

*Comments*

At the request of the Federal Energy Regulatory Commission (FERC), Maritimes and Algonquin have provided a draft federal consistency certification to CZM. Our comments are organized in the same format as the certification.

• WATER QUALITY

Generally, CZM will look to the DEP 401 water quality certification for assurance that the proposed project carries out the intent of CZM's water quality policies. In particular, the water quality impacts of the proposed methods of pipeline burial are of concern to CZM and we will work with DEP to evaluate the extent of these impacts.

WATER QUALITY POLICY #1 - Ensure that point-source discharges in or affecting the coastal zone are consistent with federally approved state effluent limitations and water quality standards.

The applicant has stated that approximately 2,000 cubic yards of bentonite clay and 1,000 cubic yards of drilled spoil from horizontal directional drills will be deposited in the immediate vicinity of the HDD exit holes. As bentonite clay does not readily disburse, an off-site disposal plan must be developed for this activity.

Algonquin has relied on the Massachusetts Water Resource Authority's (MWRA) water quality monitoring program for information provided in Resource Report 2 - Water Use and Quality. In a letter to Secretary Durand dated December 8, 2000, the MWRA has expressed concern about the short and long term impacts of the proposed pipeline on the federally-mandated outfall water quality monitoring program. CZM requests that the applicant incorporate the response to the MWRA's comment into its revised federal consistency certification.

WATER QUALITY POLICY #2 - Ensure that nonpoint pollution controls promote the attainment of state surface water quality standards in the coastal zone.

We note the presence of a discontinued disposal area between MP 7 and 8. The applicant is asked to positively determine past uses of this site as it appears to be the "Foul Area", which was used as a dump site for numerous hazardous wastes, most of which is undocumented and, therefore, the exact nature and location of the dumped material is unknown. This area is well outside the sediment sampling areas tested for this project. The materials deposited at this site must be identified and the soils sampled for contaminants.

• HABITAT

CZM will look to local Orders of Conditions to implement the provisions of the Massachusetts Wetlands Protection Act.

HABITAT POLICY #1 - Protect coastal resource areas including salt marshes, shellfish beds, dunes, beaches, barrier beaches, salt ponds, eelgrass beds, and fresh water wetlands for their important role as natural habitats.

In Resource Report 2, the applicant states that there will be no impacts to wetland resources from construction of the HubLine project. In fact, mud flats and land under the

ocean are considered to be wetland resources under the Massachusetts Wetlands Protection Act, both of which would be affected by pipeline construction.

The applicant states that the project avoids passing through known shellfish beds. CZM will consult with the Massachusetts Division of Marine Fisheries to ensure that this is so and that construction methods will not adversely affect shellfish or finfisheries.

Throughout the documents reviewed, Algonquin has noted the anchoring methods necessary for the pipe-laying methods proposed. Twelve anchors will be placed along a corridor up to 2100 feet outboard of the barges (a total of 4200 feet wide), and they will be lifted and reset as the barges move along the path of the pipeline. These continuous parallel lines of bottom disruption caused by the setting and lifting of anchors significantly widens the project's impact on sea bottom habitat. CZM requests an analysis of this additional impact of the proposed project on marine habitats.

• PROTECTED AREAS

PROTECTED AREAS POLICY #1 - Preserve, restore, and enhance complexes of coastal resources of regional or statewide significance through the Areas of Critical Environmental Concern program.

The proposed pipeline would pass through the state-designated South Essex Ocean Sanctuary. CZM addresses ocean sanctuaries by reference throughout its enforceable policies rather than by a specific policy. The applicant has chosen to address this important matter in relation to CZM's Protected Areas Policy #1. The applicant has stated that the proposed activity is permissible under the Ocean Sanctuaries Act.

On behalf of the Massachusetts Department of Environmental Management (DEM), Commissioner Peter Webber has written to FERC regarding this matter. In his letter, Commissioner Webber has outlined the basis for a determination that an activity is permissible within an ocean sanctuary and has asked the applicant to demonstrate the "public necessity and convenience" of the proposed pipeline, to demonstrate that the project will be for electrical generation purposes as required by the Act, and that the project will not harm marine resources protected by the Act. CZM requests that the applicant incorporate the response to Commissioner Webber's letter into a revised federal consistency certification. CZM will be guided by DEM's determination of the permissibility pipeline project in the South Essex Ocean Sanctuary.

Algonquin makes reference to CZM's March 18, 1977 Draft Environmental Impact Statement (DEIS)/Program Plan filed with the U.S. Department of Commerce (DOC) and response to a comment regarding oil pipelines through ocean sanctuaries. The applicant should note that CZM's program policies have been revised and approved by DOC on March 11, 1997. Among the revisions was the removal of language that in any way authorized oil pipelines in or affecting the Massachusetts coastal zone.

• COASTAL HAZARDS

The applicant is proposing to directionally drill under George's Island, a glacial drumlin, between Black Rock Channel and Nantasket Roads but did not survey that portion of the route. We note that most of the Boston Harbor drumlins are clay-cored, thus can be destabilized by construction activities. The Central Artery/Tunnel Project found that extensive subsurface engineering was needed to strengthen the core of Spectacle Island to accommodate construction activities. Algonquin may wish to determine if the soils under George's Island will be stable enough to allow safe placement of a gas pipeline before becoming too dependent on this portion of the routing plan.

In a discussion of seismic risk in Resource Report 6 - Geological Resources, it is stated that risk from earthquakes does not appear to be significant. It would, however, be interesting to know the intensity of earthquake that pipelines such as the one proposed are designed to withstand.

COASTAL HAZARD POLICY #2 - Ensure construction in water bodies and contiguous land areas will minimize interference with water circulation and sediment transport. Approve permits for flood or erosion control projects only when it has been determined that there will be no significant adverse effects on the project site or adjacent or downcoast areas.

See comments in Ports Policy #3 for discussion of pipeline laid on the surface of the ocean floor.

• PORT AND HARBOR INFRASTRUCTURE

PORTS POLICY #1 - Ensure that dredging and disposal of dredged material minimize adverse effects on water quality, physical processes, marine productivity and public health.

The applicant has based its description of sediment suspension from dredging, jetting and plowing operations on experience gained in Long Island Sound. CZM believes that the proposed pipeline route may have different soil conditions, and certainly has significantly different exposure to weather conditions than does Long Island Sound. We request that the applicant provide plume modeling based on conditions that may be expected in western Massachusetts Bay.

PORTS POLICY #3 - Preserve and enhance the capacity of Designated Port Areas (DPAs) to accommodate water-dependent industrial uses, and prevent the exclusion of such uses from tidelands and any other DPA lands over which a state agency exerts control by virtue of ownership, regulatory authority, or other legal jurisdiction.

The applicant has stated in comments on CZM's Ports Policy #1 that the work is not part of any port or harbor infrastructure. In fact, the proposed route for HubLine would cross the entrance channels to the ports and Designated Port Areas (DPAs) of Salem,

Boston, and Quincy/Weymouth. CZM maintains that entrance channels are, in fact, a crucial element of any port's infrastructure.

The proposed depth of pipeline burial is three feet. The applicant has stated that, where foreign structures are encountered and at locations where bedrock or hard till are encountered near the submarine surface, the pipeline will be laid on the ocean floor and protective armor placed over the pipeline. The locations proposed for this treatment are not identified in the documents listed above however, given the bedrock and hard till, and number of foreign structures found in Boston Harbor, we infer that much of the pipeline laid through that area will be laid on the ocean floor. A review of the geophysical investigations and the cross-sections depicted on the alignment drawings suggests that many of the shallowest waters on the pipeline route are also in Boston Harbor.

Deep draft vessels anchoring off and calling the Port of Boston need the deepest waters of all maritime users. We are concerned about the possibility of a minimally covered or armored gas pipeline on the sea floor coming into conflict with shipping. At a December 20, 2000 meeting of the Port Operator's Group (an operational organization focusing primarily on commercial shipping in Boston Harbor), pilots identified five different anchorages along the proposed pipeline route that are in active use. Further, the applicant's geophysical consultant identified problems at approaches to shipping channels and anchorage (p.16). "Numerous" ships were observed during study "in the immediate vicinity of the proposed pipeline route." "Isolated anchor drag marks are also evident on the side scan sonar records collected through this area." The "Anchorage for Explosives" may be used up to once a week (USCG - MSO Boston). Page 29 of Resource Report 6 - Geophysical Investigation includes another discussion of hazards of construction vessel/commercial traffic collision, appropriate burial depth to avoid damage from large ship anchors deployed in Precautionary Area and in emergencies elsewhere. The Massachusetts Port Authority is currently obtaining permits to further deepen the shipping channels approaching the Port of Boston. A shallowly laid gas pipeline at the entrance of the channels will severely limit the depth to which the channels can be dredged and thus Boston's continued viability as a deep-sea port. CZM recommends that the applicant consider moving the proposed route from the anchorages and channel approaches or develop a method of burying the pipeline to a depth that will not conflict with present or future maritime operations.

As the proposed route enters the mouth of the Fore River in Weymouth, there are a number of concerns, among them the fact that plans are not detailed enough for clear identification of the route and its impacts. The applicant should determine the future dredging needs in the Germantown Point area, as this is near the turning basin for oil tankers transiting the Fore River/Route 3A Bridge. As the geophysical investigation has disclosed, there are a significant number of pipelines and cable crossings (including the cables that operate the 3A Bridge and the MWRA's relief sewers that are now under construction) at the mouth of the Fore River. In addition, a temporary bridge over the Fore River is now under construction and eventually the existing bridge will undergo major structural repair or be replaced. The HubLine project must take great care to avoid affecting existing and future projects in the Fore River.

It appears that the proposed route will cross the federal channel into the Fore River Designated Port Area (DPA). The is a significant amount of marine traffic through this area and the pipeline needs to be placed at a depth that will accommodate any future dredging needs, including the possible reuse of the Fore River Ship Yard. CZM also requests a schedule for any construction closures of the Fore River related to this project.

The applicant should note that the proposed East Boston pipe yard, identified by the applicant as a potential staging area, is upstream of the McArdle Bridge, which is scheduled for repairs and channel closures throughout the summer of 2001 and again in the following spring.

• ENERGY

ENERGY POLICY #1 - For coastal dependent energy facilities, consider siting in alternative coastal locations. For non-coastal dependent energy facilities, consider siting in areas outside of the coastal zone. Weigh the environmental and safety impacts of locating proposed energy facilities at alternative sites.

Based on its intent to deliver gas to the Deer Island Wastewater Treatment Facility and the Sithe Fore River Station, the applicant has declared that it finds the proposed project to be coastal dependent and therefore consistent with CZM's Energy Policy. To support this contention, Algonquin points out that the Sithe plant has been determined to be a coastal dependent energy facility and that the Deer Island is coastal dependent.

In the case of Deer Island, the applicant has confused the regulatory terms "coastal dependent" and "water dependent". Deer Island, for Chapter 91 purposes, is considered a water dependent facility. "Coastal dependent" is a term applied to energy facilities through CZM's Energy Policy. The Deer Island Wastewater Treatment Facility is not an energy facility, therefore the term "coastal dependent" is not applicable. In fact, Deer Island is fully powered by non-coastal dependent energy sources.

The Boston Edison Edgar Energy Station, which is now known as the Sithe Fore River Station, pre-dated the Massachusetts Coastal Zone Management Program. It was originally built at the Fore River site to allow delivery of fuel oil by tanker and to use Fore River water for cooling. The expansion at the site proposed by Sithe in 1999 uses neither of these coastal resources; however, CZM found the proposal to be consistent with its Energy Policy because of the infrastructure, such as transmission lines, that has been built to the site. Essentially, CZM's determination was based on "grandfathering" an existing facility.

The expanded Sithe Fore River Station will be fully powered by the Braintree Lateral, which will be built overland from existing Algonquin trunklines. Because the plant can receive the gas that it needs to operate from existing land-based sources, the applicant has not yet demonstrated the coastal dependency of gas delivery to the Sithe

plant. In fact, energy facilities fed by natural gas pipeline are defined in CZM's policy as not coastal dependent.

In addition, the majority of customers that have signed letters of interest or precedent agreements with Algonquin are not located in the Massachusetts coastal zone.

CZM has requested information about the eastern Massachusetts natural gas infrastructure. We suggest that the applicant provide a more rigorous alternatives analysis of possible routes for the proposed pipeline, including not only those routes that are infeasible but also those that might be feasible. The alternatives analysis should also describe the capacity of the existing natural gas infrastructure and what, if any, additional gas supplies will be delivered by the proposed project. Delivery routes to facilities in southeastern Massachusetts, Rhode Island and Connecticut should also be described. We also request that the applicant provide CZM with information regarding the offshore New Hampshire to Weymouth route that has been requested by FERC.

CZM has provided a copy of the full Program Plan discussion of its Energy Policy to the applicant.

• OCEAN RESOURCES

OCEAN RESOURCES POLICY #3 - Accommodate offshore sand and gravel mining needs in areas and in ways that will not adversely affect shorelines areas due to alteration of wave direction and dynamics, marine resources and navigation. Mining of sand and gravel, when and where permitted, will be primarily for the purpose of beach nourishment.

The proposed route may be proximate to a location with sand mining potential off of Winthrop. CZM will confirm this information in later comments.

*Federal Consistency Review*

The proposed project is subject to CZM's federal consistency review. The applicant has been notified that CZM cannot begin its review until the final MEPA Certificate for the proposed project has been issued. Please contact Jane W. Mead, Sr. Project Review Coordinator, at 617-626-1219 for information regarding these comments and the federal consistency review process.

TWS/JWM

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